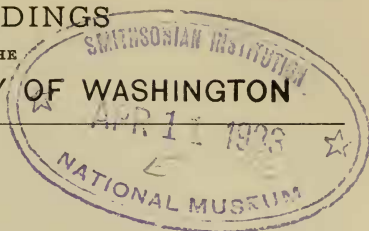


PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON



A PARTIAL STUDY OF THE CANADIAN SAVANNA
SPARROWS, WITH DESCRIPTION OF *PASSER-
CULUS SANDWICHENSIS CAMPESTRIS*, SUB-
SP. NOV. THE PRAIRIE SAVANNAH SPARROW.

BY P. A. TAVERNER.¹

For some time it has been suspected that the Savannah Sparrows of middle and western Canada have needed systematic revision and particular efforts have been made by the National Museum of Canada to obtain material to that end. Now, with a considerable series of specimens available, supplemented by selected birds courteously loaned by the Museum of Comparative Zoölogy and Major Allan Brooks, the following partial study is presented.

A cursory examination shows that the plumage of the species is subject to great variations of wear, irregular as to season. Birds of similar age, sex or season may be quite fresh in plumage or may show an amount of wear that quite obliterates slight racial characteristics. This is probably due to the varying qualities of the grasses of the particular habitat they have been frequenting at the time of taking or immediately previous. In many localities the plumage seems to disintegrate rapidly as soon as nesting duties are under way. This, pronounced in the east, is not quite so marked in the west and mid-west where the sparser grassing of the meadows produces less friction on the feather structure. Another obscuring factor in the east is the general smoked dirtiness of the plumage. Even freshly arrived spring birds and those summering in clean wilds may be, and usually are, heavily coated with a gray soot that largely

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hides the true coloration. Much of this is probably acquired in winter habitats or in smoky grounds passed through in migration.

Another source of confusion is the fact that the species is an early nester and local pairs may be engaged in nesting while more northern migrants are still passing through. This confuses the picture of breeding distribution, as no bird not actually found breeding can be reasonably assumed to be resident in a locality until well into the summer. Making all possible allowance for these sources of error the following can be derived from the material at hand:

Nova Scotia, northern New Brunswick, southern Quebec and southern Ontario birds are practically uniform and are assumed to be *Passerculus sandwichensis savanna* (Wilson), the Eastern Savanna Sparrow, type locality Savannah, Georgia, and Great Egg Harbor, New Jersey. In the material under review their distinctive character is a general light brownness above. In fresh plumage the edges of the outer scapulars lighten to white which, however, rapidly wears away to traces or disappears altogether. The lores and superciliary lines are lemon yellow, rarely, if ever, paling to white in spring.

Birds from the north shore of the Gulf of St. Lawrence as far west, at least, as the Moisie River; the Labrador; northern Ontario; and James and Hudson's Bays, as far north at least as to the Nastapoka River and Churchill are more or less distinctly darker than the above and are probably summering in clean wilds, and may be referable, at least in part, to *labradorius* Howe, but, since others are investigating these birds, no more need be said about them here.

West of Ontario, however, a progressive change of coloration is noted over the prairies. Barely perceptible in Manitoba, it culminates in decidedly pale birds in Alberta. These are noticeably lighter above, especially across the base of the neck and on the closed wings. The superciliary line averages a little paler yellow and may occasionally be practically white. The bill averages slightly finer and more acute, but too slightly so to dwell upon. In Saskatchewan birds these distinctions are not quite so well marked as they are in those from Alberta and those from Manitoba are so like the eastern ones that their separation is difficult. Conventionally they are treated here with the prairie specimens rather than with those of the eastern woodland country, though it is to be understood that they are really intermediate and only begin to show departure from type.

Birds from the interior of British Columbia are different again. They are as pale generally as the preceding prairie birds, but have a slightly ruddy cast with a suggestion of olive. The eyebrow is a still deeper yellow than in eastern birds and suffuses slightly over the face; which is probably responsible also for a somewhat olive tone on the back. The bill averages rather more attenuate than in birds of the prairies.

All the above average approximately the same size; no consistent difference in this respect, as evidenced by wing length, has been detected. In the southwest corner of the province, and probably intrusively along the southern boundary, occurs a very small bird, not as ruddy as the above, that has hitherto been known as *brooksi* Bishop, but which the fourth edition of the A. O. U. Check-list includes under *nevadensis* Grinnell. Without the material to test the wisdom of this step we must tentatively accept it, though it is remarkable that the bird inhabiting the arid Great Basin and Nevada should be postulated to occur on the humid coast of British Columbia. This same small bird has been detected breeding in limited localities in southeastern Vancouver Island, but no other form of the species seems to breed on that island. Instead, a number of birds even larger and slightly ruddier than those of the mainland interior, have been taken in migration along the west side, but are of unknown origin. Without more northern material for comparison it is best to leave them for future determination. They are much too large for the postulated *anthinus* Bonaparte and are probably more nearly allied to *sandwichensis* (Gmelin). The point to which it is necessary to call attention is that the Savanna Sparrows of the prairie provinces and British Columbia that have hitherto been lumped under *alaudinus* Bonaparte are consistently different enough to warrant subspecific distinction. The question raised is: to which should the name *alaudinus* adhere?

Passerculus alaudinus was described by Bonaparte (Comptes Rendus, xxxvii, 1853) as like *P. savanna* of Wilson but smaller, without yellow eyebrow, and with a shorter and slenderer bill. Neither the prairie bird nor that of British Columbia, to which the name has generally conjointly been attached, fulfill this diagnosis satisfactorily. They are not smaller, the eyebrows are very rarely without yellow, and the bills, while more slender, are not distinctly shorter. There is, therefore, some doubt as to the application of the name *alaudinus* to either of these two forms. A mounted specimen in the Paris Museum of Natural History, taken by Delattre, supposedly near San Francisco, is assumed to be the specimen from which the above description was taken, but no one conversant with the species has examined it critically and its status as a type is not beyond question. However, as it would be exceedingly unwise to abandon a name so well fixed in literature on a mere suspicion, it is best to accept *alaudinus* as a valid name until definite evidence to the contrary is produced. In the original description there is one character that seems to refer more to the British Columbian bird than to that of the prairies, *i. e.*, the color "rufo-olivascens" (reddish-olive) as applied to one of the varying shades of the back. The geographical evidence points the same way. The type of *alaudinus*, if a representative of either of these races, was evidently a migrant or winter resident on the California coast and hence more likely to summer west of the mountains than east of them. From these two evidences, therefore, we can presume that the ruddy, slightly olivaceous bird of the British Columbia interior should retain the name *alaudinus* and that the paler one of the prairies requires a new name, which is herewith proposed.

Passerculus sandwichensis campestris, subsp. nov.

PRAIRIE SAVANNA SPARROW.

Type.—N. M. C. 10414, ♂, near Red Deer, Alberta, June 29, 1917. Collector, P. A. Taverner. Like *P. s. savanna* of southern Ontario and *P. s. alaudinus* of southern interior British Columbia, but differing:

1. From *savanna*, in spring and summer, in being generally paler above, most noticeably across the base of the neck and on the edges of the closed wings, due to more pronounced buffy-grey feather edgings. The yellow superciliary line may be a trifle lighter (less greenish) and rarely almost white. The bill averages slightly more attenuate but is not constantly so. The breast markings average sharper and sparser but some of this may be due to cleaner, less smoke-stained plumage. These distinctions, while plainly perceived in massed material are not marked enough to make easy recognition of individuals, especially in the more eastern ranges of Manitoba, where the race blends into *savanna*, and many specimens occur that are difficult of allocation aside from geographical considerations. In autumn specimens (mostly post-juvenals examined) the above distinctions hold, but to a less degree, and perhaps it is only in Alberta birds that they are shown in a recognizable extent. Of juvenals just from the nest, only Manitoba specimens are available, and no distinction has been detected between them and *savanna*.

2. From *alaudinus* in lacking a slightly ruddy or olive cast above, and in the yellow superciliary line being paler (less orange) and not suffusing in any degree over the face or the back of the neck. The bill averages slightly less attenuated, and the breast spotting is a little blacker (less brownish) and more sharply defined. These distinctions in spring adults are plain enough to be recognized in all specimens that are not worn or faded. Autumn specimens (mostly post-juvenals) seem practically inseparable.

Localities represented by specimens referred to this form:

Manitoba: 38 spring and summer adults, 12 in first winter plumage and 11 juvenals just from nest; Shoal Lake (north of Winnipeg), Lake St. Martin, Whitewater Lake, Poplar Point, Birch Island, Oak Lake, Steep Rock, Headingly, and Carberry.²

Saskatchewan: 19 spring and summer adults, 6 in first winter plumage—Indian Head, Cypress Lake, 12 Mile Lake, Last Mountain Lake, Kute-wagan Lake, Wood Mountain Post, Crane Lake, Basin Lake, and Elrose.

Alberta: 26 spring and summer adults, 21 in first winter plumage—Lac la Nonne (type locality), Edmonton, Banff, Rumsey, Steveille, Red Deer, Jasper Park, Peace River Landing, Waterton Lake Park, Many Island Lake, Milk River, Deer Creek, Innisfree, and Beaver-hill Lake.

²It might be expected that some of the migrants through the southern areas of the province would represent the dark Churchill form, but only three birds in the collection are so recognized: 5488, ♀, Pearl Beach, Michigan; May 19, 1907; 6833, ♀, Point Pelee, Ontario, May 29, 1913; and 20617, ♂, Ottawa, Ontario, April 27, 1925; which suggests that the migrations of that locality are performed through the eastern woodland region instead of southward through the prairies.

British Columbia: 3 summer adults—Atlin, and one specimen (4795, Allan Brooks) ♂ from Carpenter's Mountain Cariboo District, that is worn and uncertain of identification but tentatively included in this form, postulating a range through central as well as northern British Columbia and confining *alaudinus* to the Thompson River valley and southward.

Mackenzie: 2 summer adults—7668, ♂ Tazin River, July 11, 1914, and 8073, ♀, Coronation Gulf, June 20, 1911, one in first winter plumage, 9948, Coronation Gulf, October 15, 1915. These birds are difficult of allocation as between *savanna* and *campestris* but by bill characters seem to agree more closely with the latter. At any rate they show no suggestion that the dark Churchill form extends northwestward.